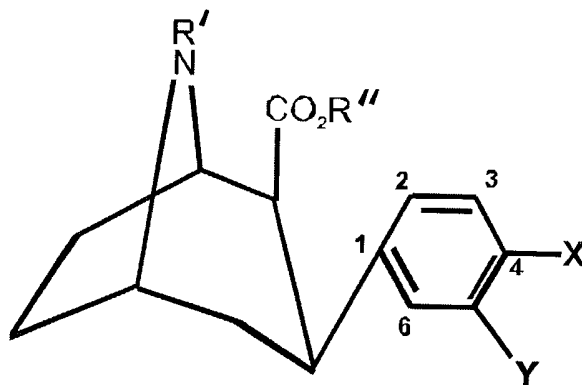
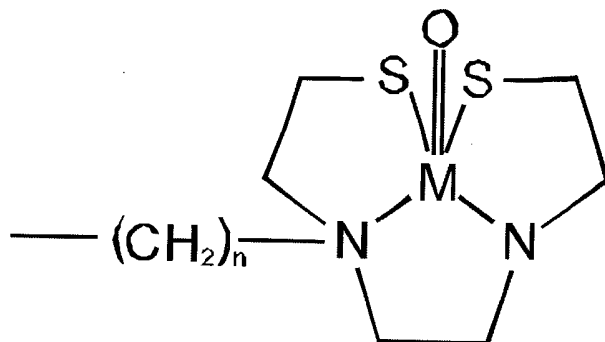


Listing of the claims:

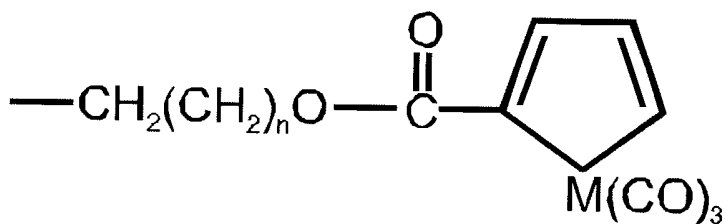
1. (currently amended) A compound of the formula:



wherein X is $-\text{CH}_2\text{CH}_2\text{Q}$, $-\text{CHCHR}$ or $-\text{CCH}_2\text{FCH}_2$ and Q is F or CH_2F , R is I, Br, Cl, F or CH_2F ; Y is selected from a group consisting of H, F, Cl, Br and I; R' is $-\text{CH}_3$, $-\text{CH}_2\text{F}$, $\text{CH}_2(\text{CH}_2)_n\text{F}$,

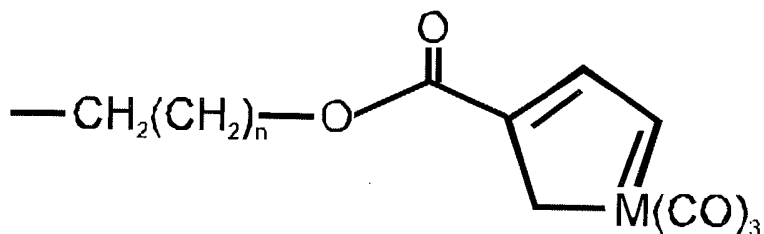


$\text{M} = \text{Tc}, \text{Re}$

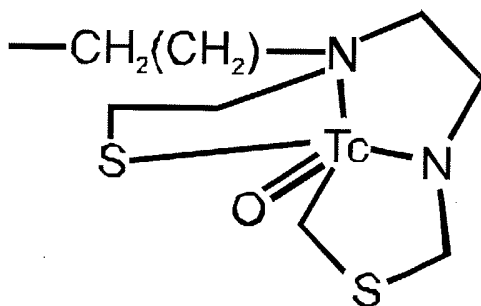


$\text{M} = \text{Re}, \text{Tc}$

R'' is -CH₃, CH₂(CH₂)_nF, -CH₃, ~~CH₂(CH₂)_nF~~,



M = Fe, Tc, Re

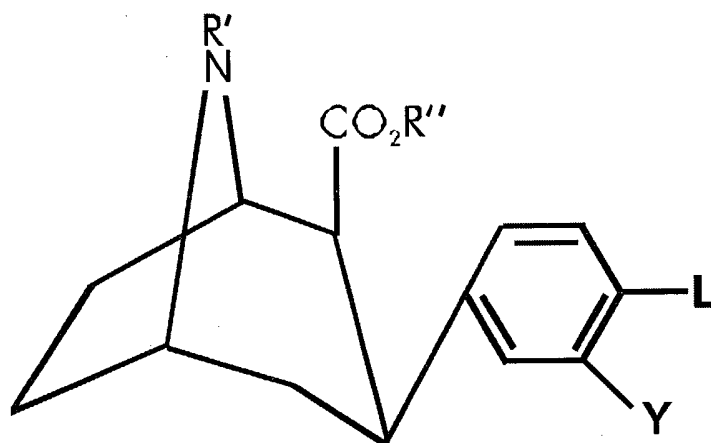


Where n is 1-5.

2. (original) The compound of claim 1 wherein at least one halogen is selected from the group consisting of ¹⁸F, ¹²³I, ¹²⁵I, ¹³¹I, ⁷⁵Br, ⁷⁶Br, ⁷⁷Br, and ⁸²Br.
3. (withdrawn) The compound of claim 1 wherein X is CH₂CH₂F or CH₂CH₂¹⁸F.
4. (withdrawn) The compound of claim 1 wherein X is CH₂CH₂CH₂F or CH₂CH₂CH₂¹⁸F.
5. (withdrawn) The compound of claim 1 wherein X is CCH₂FCH₂ or CCH₂¹⁸FCH₂.
6. (original) The compound of claim 1 wherein X is CHCHI.
7. (original) The compound of claim 1 wherein X is selected from the group consisting of CHCH¹²³I, CHCH¹²⁵I and CHCH¹³¹I.

8. (withdrawn) The compound of claim 1 wherein X is CHCHCH_2F or $\text{CHCHCH}_2^{18}\text{F}$.
9. (withdrawn) The compound of claim 1 wherein X is $\text{CCH}_2\text{CH}_2\text{F}$ or $\text{CCH}_2\text{CH}_2^{18}\text{F}$.
10. (withdrawn) The compound of claim 3 wherein Y is Br.
11. (withdrawn) The compound of claim 3 wherein Y is Cl.
12. (original) The compound of claim 6 wherein Y is H.
13. (original) The compound of claim 7 wherein Y is H.
14. (withdrawn) The compound of claim 8 wherein Y is H.
15. (withdrawn) The compound of claim 9 wherein Y is H.
16. (withdrawn) The compound of claim 10 wherein R' and R'' are CH_3 .
17. (withdrawn) The compound of claim 11 wherein R' and R'' are CH_3 .
18. (withdrawn) The compound of claim 12 wherein R' and R'' are CH_3 .
19. (withdrawn) The compound of claim 13 wherein R' and R'' are CH_3 .
20. (withdrawn) The compound of claim 14 wherein R' and R'' are CH_3 .
21. (withdrawn) The compound of claim 15 wherein R' and R'' are CH_3 .

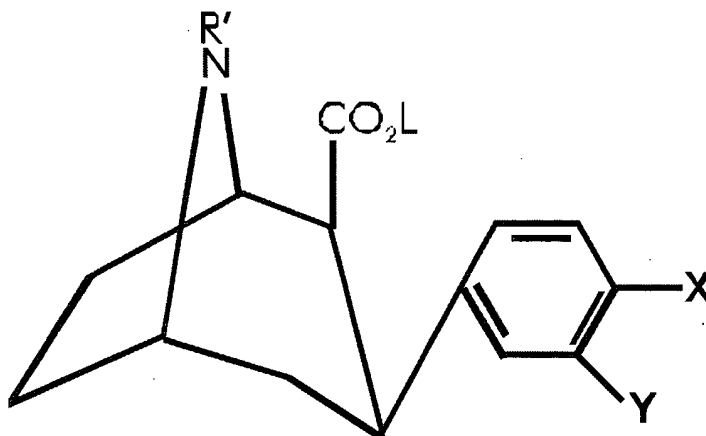
22. (withdrawn) The compound of claim 18 wherein said compound is a Z isomeric form.
23. (withdrawn) The compound of claim 19 wherein said compound is a Z isomeric form.
24. (withdrawn) The compound of claim 20 wherein said compound is a Z isomeric form.
25. (currently amended) A kit for rapid synthesis of a radioactively labeled compound of claim 1, comprising (a) a compound having the structure:



wherein L is a leaving group which is displaced by a substituent containing a radiotracer atom, radioactive group, wherein said substituent is -CH₂CH₂Q, -CHCHR or -CCH₂FCH₂ where Q is ¹⁸F or CH₂¹⁸F, R is ¹²³I, ¹²⁵I, ¹³¹I, ⁷⁵Br, ⁷⁶Br, ⁷⁷Br, ⁸²Br, ¹⁸F or CH₂¹⁸F; and (b) a reagent capable of displacing said L with the a substituent. ~~containing a radioactive group.~~

26. (canceled)

27. (currently amended) A kit for rapid synthesis of a radioactively labeled compound of ~~claim 1~~, comprising (a) a compound having the structure:



wherein L is a leaving group which is displaced by a substituent, CH₂(CH₂)_n¹⁸F where n is 1-5; -radioactive group, and (b) a reagent capable of displacing said L with the substituent, containing a radioactive group.

28. (canceled)
29. (original) A method of conducting positron emission tomography or single photon emission tomography imaging of a subject comprising administering to said subject an image-generating amount of a compound according to claim 1 which contains at least one radioactive halogen, and measuring the distribution within the subject of said compound by positron emission tomography or single photon emission tomography.
30. (original) The method of claim 29 wherein the halogen is selected from the group consisting of ⁷⁶Br, ⁷⁵Br, and ¹⁸F, and the distribution of the compound measured by positron emission tomography.

31. (original) A method for conducting single photon emission imaging of a subject comprising administering to said subject an image-generating amount of a compound according to claim 1 which contains at least one radioactive halogen, and measuring the distribution within the subject of said compound by single photon emission tomography.
32. (original) A method according to claim 31 wherein the compound of claim 1 contains at least one of the following: ^{75}Br , ^{77}Br , ^{123}I or ^{131}I , and measuring the distribution within the subject of said compound by single photon emission tomography.
33. (previously presented) The compound of claim 1 wherein X is CHCHBr .
34. (currently amended) The compound of claim 1 wherein X is selected from the group consisting of:
 $\text{CHCH}^{75}\text{Br}$, $\text{CHCH}^{76}\text{Br}$, $\text{CHCH}^{77}\text{Br}$, and $\text{CHCH}^{82}\text{Br}$.
35. (previously presented) The compound of claim 33 wherein Y is H.
36. (previously presented) The compound of claim 34 wherein Y is H.
37. (previously presented) The compound of claim 35 wherein R' and R'' are CH_3 .
38. (previously presented) The compound of claim 36 wherein R' and R'' are CH_3 .
39. (previously presented) The compound of claim 35 wherein R' is $\text{CH}_2(\text{CH}_2)_4\text{F}$ and R'' is CH_3 .
40. (previously presented) The compound of claim 36 wherein R' is $\text{CH}_2(\text{CH}_2)_4\text{F}$ and R'' is CH_3 .

41. (previously presented) The compound of claim 39 wherein said compound is a Z isomeric form.
42. (previously presented) The compound of claim 40 wherein said compound is a Z isomeric form.